



NASA Procedural Requirements

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Subject: Facility Project Implementation Guide

Responsible Office: Facilities Engineering and Real Property Division

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APPENDIX A: Definitions

Activation - the portion of the total facility acquisition process that normally follows construction. It includes the installation of ground support equipment, the integration and checkout of combined facility and equipment systems, installation of noncollateral equipment, and demonstration and acceptance of an operable facility.

Addition, Expansion, Extension - a physical increase to a real property facility, which adds to the overall dimension of the facility.

Administrator - The person responsible for leading NASA.

Agency - any executive department, agency, commission, authority, administration, board, or other independent establishment in the executive branch of the Government including any corporation wholly or partly owned by the United States and which is an instrumentality of the United States. The term as used herein does not include the municipal Government of the District of Columbia.

Allocation - (1) as used by the Office of Management and Budget and the Department of the Treasury, an amount set aside by an agency in a separate appropriation or fund account for the use by another agency to carry out the purpose of an appropriation. This term applies to amounts set aside in transfer appropriation accounts and allocated working funds; (2) the authoritative assignment of a specific amount of funds or quantity of resources to a specified agency or for a designated use usually for a given period of time; and (3), the portion of joint or indirect cost assigned to a specific objective such as a program, function, project, job, or service.

Allotment - an authorization stated on a NASA [Form 504](#) to incur commitments, obligations, and outlays within a specific amount pursuant to an appropriation or other statutory authority. The allotment constitutes a legal limitation on the total amount of funds stated thereon in accordance with procedures governing the administrative control of appropriations and funds.

Apportionment - a distribution by the Office of Management and Budget of amounts available for obligation and outlay in an appropriation of fund account. The amounts may be available only for specified time periods, activities, functions, projects, objects, purposes, or combinations thereof. The specified amounts limit obligations to be incurred.

Appropriation - statutory authority that allows Federal agencies to incur obligations and make payments out of the Treasury for specific purposes. An appropriation usually follows enactment of authorizing legislation.

- a. Annual Appropriation - an appropriation which is available for incurring obligations only during 1 fiscal year specified in the annual appropriation Act,
- b. Continuing Appropriation - an appropriation which is available for incurring obligation until exhausted or objectives are achieved,
- c. Current Appropriation - an appropriation which is available for obligation during the current fiscal year,
- d. Lump&-Sum Appropriation - an appropriation in a specified amount made for a complete program without

prescribing limitation of outlays within the stated purpose and amount,

e. Multiple-Year Appropriation - an appropriation which is available for incurring obligations for a definite period in excess of 1 fiscal year (i.e., CoF),

f. No-Year Appropriation - an appropriation which is available for incurring obligations for an indefinite period of time, and

g. 1-Year Appropriation - an appropriation that is available for incurring obligations only during a specified year.

Appropriation Year - the fiscal year in which obligations were authorized to be incurred for an annual appropriation.

Approved Facility Project Cost Estimate - the AFPCE, as listed on the 1509 and supported by the 1510, is the maximum that can be expended on a particular project or portion thereof. The original authority must approve any increase.

At-Risk Project - a project for which one of the following applies:

a. Final design has not started by the end of May preceding the fiscal year in which the project is proposed for congressional authorization, or not completed by February of the fiscal year in which the project was authorized and appropriated,

b. Significant requirements changes are made that alter the project scope as presented to Congress,

c. Construction award has not been made or is not scheduled to occur by June of the fiscal year in which the project was authorized and appropriated, and

d. Category C projects that are not awarded within 6 months after the date of release of the construction funds.

When a project is designated at risk, it can lose its funding allocation. The resources allocated to an at risk project can then be made available for satisfying shortages in Congressional appropriations or be used to fund projects at locations where resources will be obligated in a timely manner.

Authorization - a separate Act that authorizes appropriations to be made for specific purposes.

Beneficial Occupancy Date - the date on which a facility or that portion of a facility for which beneficial occupancy applies, is made available to NASA for use.

Bid Opening Date - the date all sealed bids must have been received by the Government and all bids are opened and recorded for an Invitation for BID.

Brief Project Document - NASA Form 1509 is a multipurpose document that is used from inception to completion of all facility projects estimated to cost \$50,000 or more.

Budget - a formal estimate of future revenues, obligations to be incurred, and outlays to be made during a definite period of time; and, when determined to be appropriate, based on accrued expenditures and costs to be incurred.

Budget Cycle - the period of time which elapses from the initiation of the budget process to the completion of the budget process for a particular fiscal year.

Budget Estimate - an estimated fund requirement for any element included in a budget. Collectively, all estimated fund requirements for a particular operating agency or component or consolidation thereof.

Budget Guidelines - both general and specific instructions furnished by a higher level of management as a basis for budget formulation and execution.

Budget Process - the process embracing all the stages through which the budget passes including the formulation stage, the review and enactment stage, and the execution stage.

Budget Year - the fiscal year for which estimates are submitted which is the period including October 1 through the following September 30 (see [Fiscal Year](#)).

Category A - is used for minor projects to indicate the requirement for the project was included in a congressionally budget submission.

Category C - is used for minor projects to indicate the requirement for the project has not been recognized in any congressional budget submission

Centers - Primary NASA field entities, each led by a Center Director. Some Centers have [component facilities](#), which may be geographically separated from the parent Center. Such facilities are led by a Manager or Head who reports to the parent Center official. The following are Centers:

a. Ames Research Center (ARC),

- b. Dryden Flight Research Center (DFRC),
- c. John H. Glenn Research Center (GRC) at Lewis Field,
- d. Goddard Space Flight Center (GSFC),
- e. Lyndon B. Johnson Space Center (JSC),
- f. John F. Kennedy Space Center (KSC),
- g. Langley Research Center (LaRC),
- h. George C. Marshall Space Flight Center (MSFC), and
- i. John C. Stennis Space Center (SSC).

Change in Scope - a change in objectives, work plans, or schedules which result in a material difference from the terms of an approval to proceed previously granted by higher authority; and, under certain conditions (normally stated in the approval instrument), changes in resources application may constitute a change in scope.

Change Order - a written order, signed by the contracting officer, directing the contractor to make changes to the project with/without the consent of the contractor where appropriate.

Chief Financial Officer/Comptroller - the official-in-charge of all fiscal and financial plans and operations.

Collateral Equipment (also see [Noncollateral Equipment](#)) - building-type equipment, built in equipment, and large substantially affixed equipment/property; and, is normally acquired and installed as a part of a facility project and includes as follows:

- a. Building-Type Equipment - equipment that is normally required to make a facility useful and operable. It is built-in or affixed to the facility in such a manner that removal would impair the usefulness, safety, or environment of the facility. Such equipment includes elevators; heating, ventilating, and air-conditioning systems; transformers; and compressors and other like items generally accepted as being an inherent part of a building or structure and essential to its utility. It also includes general building systems and subsystems such as electrical, plumbing, pneumatic, fire protection, and control and monitoring systems.
- b. Built-In or Large Substantially Affixed Equipment/Property - the unit of equipment or property of any type other than building type equipment which is built in, affixed to, or installed in real property in such a manner that the installation cost including special foundations or unique utility services, or facility restoration work required after its removal, exceeds \$100,000.

Completion Date - the date on which the Government formally accepts an item of work from a contractor. The date on which the Government accepts all contract deliverables is the contract completion date.

Component Facilities - organizations that are geographically separated from the NASA Centers to which they are assigned (see [Centers](#)). NASA Centers with their component facilities annotated are as follows:

- a. Deep Space Network - Goldstone, CA; Canberra, Aus.; Madrid, Spain; (JSC),
- b. Downey Facility (DF) (JSC),
- c. Ground Network at KSC (GSFC),
- d. Independent Verification and Validation Facility (IV&V) (GSFC),
- e. Michoud Assembly Facility (MAF) (MSFC),
- f. NASA Management Office (NMO)/JPL (HQ/Code S),
- g. Palmdale (JSC),
- h. Plum Brook Station (PBS) (GRC),
- i. Santa Susana Field Laboratory (MSFC),
- h. Space Network (White Sands, NM) (GSFC),
- i. Wallops Flight Facility (Wallops Island, VA) (GSFC), and
- j. White Sands Test Facility (WSTF) (JSC).

Comptroller- see [Chief Financial Officer](#).

Computerized Maintenance Management System (CMMS) - a set of computer software modules and equipment databases containing facility data with the capability to process the data for facilities maintenance management functions. They provide historical data, report writing capabilities, job analysis, and more. The data describe

equipment, parts, jobs, crafts, costs, step-by-step instructions, and other information involved in the maintenance effort. This information may be stored, viewed, analyzed, reproduced and updated with just a few keystrokes. The maintenance-related functions typically include -

- a. Facility/Equipment Inventory,
- b. Facility/Equipment History,
- c. Work Input Control,
- d. Job Estimating,
- e. Work Scheduling and Tracking,
- f. Preventive and Predictive Maintenance,
- g. Facility Inspection and Assessment,
- h. Material Management, and
- i. Utilities Management.

Constructability - the design and installation properties and characteristics of a facility that enable it to be constructed in a cost effective and timely manner.

Construction - alteration or repair (including dredging, excavating, and painting) of buildings, structures, or other real property. For purposes of this definition, the terms buildings, structures, or other real property include but are not limited to improvements of all types such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, cemeteries, pumping stations, railways, airport facilities, terminals, docks, piers, wharfs, ways, light-houses, buoys, jetties, breakwaters, levees, canals, and channels. Construction does not include the manufacture, production furnishing, construction, alteration, repair, processing or assembling of vessels, aircraft, and other kinds of personal property.

Construction Contractor - a business entity (i.e., person, corporation, partnership, joint venture) which has satisfied the contracting officer that they qualify as one: (1) who owns, operates, or maintains a place of business regularly engaged in the construction, alteration, or repair of buildings, structures, communication facilities, or other engineering projects including furnishing and installing of the necessary equipment; or (2) who, if currently entering into a construction activity, has made all necessary prior arrangements for personnel, construction equipment, and required licenses to perform construction work.

Construction of Facilities - a congressional appropriation which provides funding for the revitalization projects (repair, rehabilitation, and modification of existing facilities); the construction of new facilities; the acquisition of related collateral equipment; environmental compliance and restoration activities; the design of facilities projects; and advanced planning related to future facility needs.

Contingency (Construction) - an allowance included in the current cost estimate to cover uncertainties during the construction phase of the project such as site conditions and construction interferences (see also Contingency (Design)).

Contingency (Design) - an allowance included in the engineering estimate to allow for added unanticipated costs due to design uncertainties and incomplete or changing user requirements.

Contracts - all types of agreements and orders for the procurement of supplies or services. Includes awards and notices of award; contracts of a fixed-price, cost, cost-plus a fixed-fee, or incentive type; contracts providing for the issuance of job orders, task orders, or task letters; letter contracts; and purchase orders. It also includes supplemental agreements with respect to any of the above.

Contract Award - the date the contracting officer signs the contract documents.

Contract Modification - any written alteration in the specification, delivery point, rate of delivery, contract period, price, quantity, or other contract provisions of an existing contract whether accomplished by unilateral action in accordance with a contract provision or by mutual action of the parties to the contract. It includes bilateral actions such as supplemental agreements; and, unilateral actions such as change orders, administrative changes, notices of termination, and notices of the exercise of a contract option.

Contracting Officer - any person who, by appointment in accordance with procedures prescribed by the Federal Acquisition Regulations (FAR) and NASA FAR Supplement, has the authority to enter into, administer and/or terminate contracts, and make related determinations and findings. The term includes certain authorized representatives of the contracting officer acting within the limits of their authority as delegated by the contracting officer.

Contracting Officer Technical Representative - an authorized representative of the contracting officer acting within

the authority delegated by the contracting officer.

Contractor - the supplier business entity providing an end item of supply or serving under the terms of a specific contract.

Current Cost Estimate - a calculated anticipated amount that reflects the latest and best professional cost estimate for a given project at any given time during planning, design, or construction. It is the amount that is anticipated that will be expended for labor, materials, and other items and contractor services required to fully execute the planned facility project. It includes all amounts anticipated to be expended for land acquisition; site work; construction; and the purchase and/or installation of building-type and built in equipment or furnishings as well as large substantially affixed equipment. It must include a reasonable estimate for contingencies. If the project is to be carried out for NASA by a construction agent, the estimated cost also includes costs associated with the use of such an agent.

Current Year - the fiscal year immediately preceding the budget year.

Design - the term used to encompass both preliminary design and final design for facility projects. Design costs are normally funded under the CoF appropriation. Design costs of facility projects proposed for funding under appropriations other than CoF are normally funded under the same appropriation from which the facility project is to be funded with such costs being identified separately from the facility project cost estimate.

Design Reviews - a technical review comment and approval of the facility project engineering design work generally conducted at the 35 percent, 60-percent, and 90-percent design milestones of the project.

Directors of Centers - the heads of the Centers.

Discrete Facility Program - construction and facility revitalization (repair, rehabilitation, and modification) in excess of \$1,500,000; and land acquisition and emergency repair approved under the provisions of Section 308(b) of the National Aeronautics and Space Act of 1958, as amended, at any cost.

Disbursements - gross disbursements represent the amount of checks issued and cash or other payments made less refunds received. Net disbursements represent gross disbursements less income collected and credited to the appropriation or fund account such as amounts received for goods and services provided.

Drawings - graphic data including drawings as defined in MIL-D-STD-100A and prepared in accordance with MIL-D-1000, Category D; aperture cards in accordance with MIL-C-9877; graphs or diagrams, industry standards, and industry specifications on which details are represented with sufficient information to define completely, directly or by reference, the end result in the selection, procurement, and manufacture of the item required.

Easement - an acquired privilege or right of use or enjoyment that one may have in land of another. For example, an easement for road or highway purposes, construction, and maintenance of utility lines.

Emergency Repair - restoration of an existing facility or the components thereof when such facilities or components have been made inoperative by major breakdown, accident, or other circumstances that could not be anticipated in normal operations; and, the repair is of such urgency that it cannot await programming and accomplishment in the normal budget cycle. In the process of emergency repairs, the replacement of components or materials will be of the size or character currently required to meet firm demands or needs.

Environmental Analysis - the process that makes the initial evaluation of the environmental effects of a proposed action including alternative proposals.

Environmental Assessment - a document within which the environmental effects of proposed actions are initially identified and analyzed. It forms the basis for a Finding of No Significant Impact or a Notice of Intent to Prepare an EIS.

Environmental Impact Statement - a device for use by officials to plan actions and make decisions. It documents the environmental analyses of major actions that have a significant impact upon the quality of the environment.

Equipment/Property - all types of equipment including collateral equipment, general purpose equipment, special test equipment, ground support equipment, and other special purpose equipment such as automatic data processing equipment, data control consoles, and instrumentation which may or may not be capitalized.

Facility - land, buildings, structures, and other real property improvements including utility systems and collateral equipment. The term does not include operating materials, supplies, special tooling, special test equipment, and noncapitalized equipment (see [Financial Management Manual](#) for criteria for capitalized equipment). The term facility is used in connection with land, buildings (facilities having the basic function to enclose usable space), structures (facilities having the basic function of a research or operational activity), and other real property improvements.

Facility Acquisitions - the acquisition of an interest in land, buildings, other structures and facilities, or leasehold improvements. The normal facility acquisition methods include purchase, transfer, lease, easement, use permit, and rights of way.

Facility Activation - the process of bringing a newly defined capability on-line following the completion of the basic previously defined Construction of Facilities project. This includes, but is not limited to, such activities as installation of noncollateral equipment; connection of noncollateral equipment to its interface; checkout of systems; and validation activities in support of operational readiness testing.

Projects or tasks associated with normal facility activation for noncollateral items or capabilities are not properly CoF funded but should be funded by either program or institutional resources as appropriate; and be properly documented and approved as may be required through normal management channels. The activation process begins when:

- a. The construction of a facility project or a definable portion such as a work package or specific area is complete and has been accepted by the Government; or,
- b. Beneficial or joint occupancy is taken on a facility project or definable portion thereof.

Facilities Maintenance - the recurring day-to-day work required to preserve facilities (buildings, structures, grounds, utility systems, and collateral equipment) in such a condition that they may be used for their designated purpose over an intended service life. It includes the cost of labor, materials, and parts.

Maintenance minimizes or corrects wear and tear and, thereby, forestalls major repairs. (Facilities maintenance work does not include work on noncollateral equipment.)

Facility Need Date - the date when the appropriate facility is required to receive program hardware for test and checkout. First operational use of the facility completes this milestone.

Facility Outfitting - see [outfitting](#).

Facility Project - the consolidation of applicable specific individual types of facility work including related collateral equipment, which is required to reflect all of the needs. Generally, they are related to one facility, which have been or may be generated by the same set of events or circumstances, which are required to be accomplished at one time in order to provide for the planned initial operational use of the facility or a discrete portion thereof.

Facility Project-Brief Project Document (Form 1509) - a multipurpose document which must be used for all facility projects estimated to cost \$50,000 or more regardless of location or source of funding.

Facility Project Cost Estimate (Form 1510) - data for the approved facility project cost estimate (AFPCE) summarized in NASA Form 1509.

Facility Project Management System -; the computerized system used to generate monthly status reports on the Construction of Facilities program. (see [FPMS](#) for details of the current system).

Facility Project Manager - an individual who has the most direct responsibility to organize, manage, and direct the multitude of activities and complete the assigned facility project work on schedule with the approved funds. Different individuals may fill this role at different phases of a project. Titles used at the different Centers may also vary for this position.

Failure Modes and Effects Analysis (FMEA) - analysis used to determine what parts fail, why they usually fail, and what effect their failure has on the systems in total. An element of Reliability Centered Maintenance (RCM). (see [Reliability Centered Maintenance Guide for Facilities and Collateral Equipment](#) for details.)

Federal Agency - any executive agency or any establishment in the legislative or judicial branch of the Government (except the Senate, the House of Representatives, the Architect of the Capitol, and any activities under the architect's direction).

Fiscal Year - the Federal Government's 12-month period from October 1 on one calendar year through September 30 of the following year.

5-Year Plan - projects that meet functional requirements needed to achieve a Center's assigned mission objectives and the conversion of these requirements into facility and equipment resource needs.

Flash Bid Report (Form 1579) - a form summarizing the results of a project bidding process.

Forecast - predicted costs or accomplishments of a plan based on projected future conditions. The term is used in connection with projecting estimated commitments, obligations, and outlays for a period of time in the future.

Fragmentation - separation of distinct facility requirements into increments that are dependent on each other to provide a complete and usable facility. In order to prevent the appearance of fragmentation, additional work may not be added until 90 days after completion of the project without approval of the Headquarters Director, Facilities Engineering Division.

Full Disclosure Concept - for all stages of planning, approval, and management of a facility project, the Full Disclosure Concept requires that the project documentation outline all reasonably identifiable elements of cost

necessary to achieve a fully operable facility for initial occupancy together with an appropriate allowance for contingencies that may arise during construction. This documentation will identify those elements normally included in the estimated cost of the facility project including applicable collateral equipment; and, it will identify by source, general types, and cost all other equipment required so that the facility may serve its initial function or purpose (see [Appendix D](#), Facility and Other Related Costs, for a listing of items and types to include). The project documentation must also identify and quantify those elements of cost, which are otherwise appropriate for inclusion in the project cost or supporting documentation; but for which meaningful cost estimates cannot be prepared at that time. This effort is necessary in order to assess the total project cost impacts and to permit the authorizing or approving authority to recognize which elements of cost are not included at any given time and which elements may subsequently require additional funding from the same or a different source.

Functional Management - the centralized professional leadership, coordination, and oversight policy guidance of Agencywide activities in a given technical or administrative functional area to ensure effective and efficient performance.

Fund - a sum of money or other resource authorized by law to be set aside and to be used or expended only for specified purposes.

Funding - the issuance of allotments (NASA Form [504](#)) which provide authority to incur commitments and obligations and make payments within appropriations made by Congress, apportionment limitations established by the Office of Management and Budget (OMB), and the approved resources authorization (NASA Form [506A](#)).

Government Furnished Property - property owned by the Government and provided to a contractor for use in performance of a contract.

Ground Support Equipment - non-flight equipment, implements, and devices required for the handling, servicing, inspecting, testing, maintaining, aligning, adjusting, checking, repairing, and overhauling of an operational end item or a subsystem or component thereof. This may include equipment required to support another item of ground support equipment as defined herein.

Improvements - an addition to land, buildings, other structures, and attachments or annexations to land that are intended to remain so attached or annexed such as sidewalks, drives, tunnels, utilities, and installed collateral equipment.

Indirect Cost - cost of labor and material that cannot be related to specific research and development projects.

Installation - NASA Headquarters, Centers and component facilities.

Invitation for Bids - the complete approved solicitation documents used to acquire a project requirement under sealed bidding rules in the Federal Acquisition Regulations and NASA FAR Supplement.

Jet Propulsion Laboratory (JPL) - Government-Owned, Contractor-Operated (GOCO) facility, is a Federally Funded Research and Development Center (FFRDC), under the terms of a contract with the California Institute of Technology (CalTech).

Land Acquisition - acquisition of title to land including any interest therein such as mineral and water rights, easements, rights of way, or interagency permits whether obtained by purchase or other means.

Lease - an instrument conveying an interest in land, buildings, or other structures and facilities for a specified term; and, revocable as specified by the terms of the instrument, in consideration of payment of a rental fee.

Life-Cycle cost - a procedure for determining the long term economic impact of a decision that encompasses all program costs associated with a facility including costs of planning, design, construction, operation, maintenance, salvage, or residual value at the end of the intended period of use.

Limitation - a statutory or administratively imposed restriction within an appropriation or other authorization or fund that establishes the maximum amount that may be used for specified purposes.

Long-Lead-Time Items - items which, because of their complexity of design, complicated manufacturing processes, or limited production may cause production or procurement cycles; and, which would preclude timely or adequate delivery, if not ordered in advance of normal provisioning.

Maintainability - the design, installation, and operational characteristics of an item that enables it to be retained in or returned to a specified operational condition by expending resources at an acceptable rate using prescribed procedures.

Maintenance - see [Facilities Maintenance](#).

Major Facility Work - see [Discrete Facility Program](#).

Management Plan - a formal or informal document that provides direction and guidance for the in-house management of projects. The plan should identify the impact on the Center, risk involved with the project, team

members, financial management plans, outage requirements, and the structure/strategy for implementing the project.

Minor Construction - the erection, installation, or assembly of a new or replacement facility; or, an addition in area, volume, or both, to an existing facility. Both are greater than \$500,000 but no more than \$1,500,000.

Minor Facility Program - construction and facility revitalization (repair, rehabilitation, and modification) in excess of \$500,000 and not exceeding \$1,500,000.

Mission - the performance of a coherent set of research and development, technology and science investigations or operations to achieve program goals.

Modification - see [Rehabilitation and Modification](#).

Must - Imposes obligation, indicates a necessity to act.

NASA - the National Aeronautics and Space Administration.

NASA installations - Headquarters and all Centers and their component facilities.

Negotiate, Negotiated, and Negotiation - the method of making purchases and contracts without using sealed bidding procedures.

New Capability - a discrete facility project that is required to support new programmatic or institutional requirements. This includes projects for the rehabilitation/modernization and repair of existing facilities when the facility is to be used to support new programmatic or institutional requirements.

Nonappropriated Funds - funds not associated with an appropriation such as funds received through international cooperation, gifts, donations, and NASA exchanges.

Noncollateral Equipment - equipment other than collateral equipment which, when acquired and used in a facility or a test apparatus, can be severed and removed after erection or installation without substantial loss of value or damage to the premises where installed.

A unit of equipment may be considered noncollateral if it has such a close relationship to a Program project hardware item (i.e., prototype or test article, launch vehicle, spacecraft) that it is essentially an extension of the Program hardware item in that its configuration and/or operating characteristics must constantly reflect unpredictable changes in the Program item.

The relationship between the equipment item under consideration and the Program item must be clear and significant; and, it must be evident that sufficiently frequent changes in the equipment item are definitely to be expected due to the nature or complexity of the Program item although it may not be possible to predict the extent or actual frequency of such changes. This definition is provided to permit a more proper classification of equipment involved in the sensitive interfaces frequently found between an item of Program hardware and an associated facility such as a test or a launch stand, wind tunnel, or other Program technical facility. Each case, which involves substantially affixed equipment, will be specifically identified in the appropriate facility project documentation; and, the rationale will be provided to support the determination that the equipment being categorized as noncollateral is so categorized in accordance with the application of this specific guidance.

Notice to Proceed - the effective date of direction from the contracting officer to the selected contractor authorizing commencement of work.

Obligation - an obligation is incurred when an order is placed, a contract awarded, a service received, or other similar transactions occurred requiring disbursement of money. Obligations are the sum of undelivered orders, liabilities, and disbursements.

Operational Readiness Review - the final NASA review of a facility immediately prior to placement into its intended operation.

Operations and Maintenance Manuals - O&M manuals are organized procedural information specifying methods of operating and maintaining building systems, collateral equipment, and support equipment. O&M manuals are used in the performance of day-to-day operations and maintenance tasks. Preferably the manuals are in an electronic format.

Outfitting - the process of equipping a facility for its intended purpose with items that can be typically replaced or reconfigured many times over the life of the facility.

Option - a unilateral right in a contract by which, for a specified time, the Government may elect to purchase additional supplies or services called for by the contract, or may elect to extend the term of the contract.

Outlays - see [Disbursements](#).

Partnering - a Government-contractor relationship to foster the achievement of mutually beneficial goals (see [NFS, 48 CFR Chapter 18 Part 1836 Subpart 1836.70](#)).

Past-Year - the fiscal year immediately preceding the current fiscal year.

Payback - the amortization period defined in years calculated by dividing the total budget estimate by the total expected discounted annual savings.

Predictive Testing & Inspection (PT&I) - the use of advanced technology to assess machinery condition. The PT&I data obtained allows for planning and scheduling preventive maintenance or repairs in advance of failure.

Procurement - the purchasing, renting, leasing, or other acquisition of supplies or services. It also includes all functions that pertain to the acquisition of supplies and services including description but not determination of requirements, selection, and solicitation of sources, preparation and award of contract, and all phases of contract administration.

Program - a related series of undertakings that continue over a period of time (normally years) and are designed to accomplish a broad scientific or technical goal in the NASA Long Range Plan.

Program Offices - Headquarters organizational elements such as:

- a. Office of Space Flight (OSF) (Code M),
- b. Office of Aerospace Technology (OAT) (Code R),
- c. Office of Space Science (OSS) (Code S),
- d. Office of Biological and Physical Research (Code U).
- e. Office of Earth Science (OES) (Code Y).

Program Operating Plan (POP) - a document produced by a Center in response to Headquarters-directed budget guidelines. It is a compilation of the requested budgets by program or project that are needed to execute the Headquarters direction. In cases where estimate exceeds the guideline, the additional funding requirement is displayed as an over guideline request.

Program Year - a concept of accounting for funds, obligations, and outlays under a no-year appropriation by identification of transactions in fiscal year segments identified by the fiscal year in which individual items were obligated.

Programming - the process of planning and organizing a program; especially, in terms of quantitative physical requirements of human resources, materials, and facilities.

Progress Payment - a payment made to a contractor as work progresses. Amounts usually are based upon costs incurred and work performed at a particular stage of completion.

Project - within a program, an undertaking with a scheduled beginning and ending which normally involves one of the following primary purposes: (1) the design, development, and demonstration of major advanced hardware items; (2) the design, construction, and operation of a new launch vehicle (and associated ground support) during its research and development phase; and (3), the construction and operation of one or more aeronautical or space vehicles and necessary ground support in order to accomplish a scientific or technical objective.

Project Advocate - the facility user at the Center who also stipulates the functional requirements. The project advocate at Headquarters is the Program Office counterpart of the facility user.

Project Approval Document - a document which, when signed by the Administrator or designee, authorizes and directs the responsible designated official(s) to initiate and carry out the project within the scope defined in the document; and within funding approvals established through the NASA system for resources authorizations and allotment of funds. For CoF, project approval delegations are contained in NPD 7330.1 (for hyperlink see paragraph 2.5.2), Approval Authorities for Facility Projects. The Facility Project - Brief Project Document (NASA Form 1509) constitutes the CoF Program Approval Document (PAD) and is used to approve all construction projects \$50,000 or more regardless of source of funding. For facility planning and design (FP&D) activities related to future facility needs, approval is authorized by the Headquarters Director, Facilities Engineering Division, using a specific PAD other than the NASA Form 1509. Use of NASA funds is limited to approved projects but project approval by itself does not provide resources authority.

Project Proposal - a brief summary and description of a proposed project, which is submitted with a draft project approval document to the Deputy Administrator or designee by a program director when requesting authorization to initiate a new project. The project proposal serves as a briefing document on the project as proposed to the Administrator.

Project Scope - the documented broad definition of a facility project expressed in terms of the programmatic or institutional purpose to be served or by the operational capacity or output to be provided by the resultant facility. The expression of the scope of a facility project involves such factors as location; basic purpose or purposes to be

served; capabilities, capacity, or output to be provided for such activities as research, test, storage, or other functional needs; collateral equipment needed for the initial use of the projects; numbers and types of personnel to be accommodated; physical dimensions or configuration (structures only); and, area or cubic size of the proposed facility.

Purchase Request/Purchase Order - the funded procurement request document prepared and approved according to the Center instructions that state and describe the Government need for supplies or services.

Real Property - land, buildings, structures, utility systems, and improvements and appurtenances thereto, permanently annexed to land. The term real property also includes installed collateral equipment.

Refurbish - see [Rehabilitation and Modification](#).

Rehabilitation and Modification - the facility work required to restore and enhance and alter or adjust a facility or component thereof, including collateral equipment, to such a condition that it may be more effectively used for its presently designated purpose or so as to increase its functional capability. For simplification in facility project titles, work may be properly identified as rehabilitation provided the primary reason for accomplishment is that the basic restoration work must be done in any event. It is deemed prudent to accomplish any related enhancement, alteration, or adjustment work at the same time. If the pressing requirement is for the alteration and adjustment work to achieve an increase in functional capability, then the project may be simply classified as modification even though restoration is also involved.

Related Costs - elements of project work that are not included in the facility project cost estimate.

Reliability Centered Building and Equipment Acceptance Guide - a technical reference for design engineers, project and program managers, construction managers and inspectors, quality control personnel, and NASA quality assurance staff to use prior to and during the equipment startup/checkout phase of new construction, repair or rehabilitation projects. It focuses on the use of Predictive Testing and Inspection (PT&I) technologies by the contractor to detect latent manufacturing and installation defects as a normal part of the contractor's quality control program.

Reliability Centered Maintenance (RCM) - the process that is used to determine the most effective approach to maintenance. It involves identifying actions that, when taken, will reduce the probability of failure and which are the most cost effective. It seeks the optimal mix of Condition-Based Actions, other Time- or Cycle-Based actions, or a Run-to-Failure approach. (see [Reliability Centered Maintenance Guide for Facilities and Collateral Equipment and PT&I](#).)

Renewal Rate (Yearly) - expressed in years, it is the Current Replacement Value (CRV) in dollars divided by the Revitalization investment expressed in dollars per year.

Renovate - see Repair.

Repair - that facility work required to restore a facility or component thereof, including collateral equipment, to a condition substantially equivalent to its originally intended and designed capacity, efficiency, or capability. It includes the substantially equivalent replacement of utility systems and collateral equipment necessitated by incipient or actual breakdown.

Replace - see Repair.

Reprogramming - the process of revising a previously established program or project; and revision of budget estimates under a revised program or project.

Request for Proposal - the complete approved solicitation documents used to acquire a project requirement under the negotiating rules in the Federal Acquisition Regulations (FAR) and NASA FAR Supplement (NFS).

Resources - the actual assets of a governmental unit such as cash, human resources, and materials.

Resources Authority Warrant - a document (NASA Form 506A) granting authority to initiate, commit, obligate, and outlay within funds available in the allotment (NASA Form 504) for conduct of approved projects and activities.

Restoration/Modernization - a discrete facility project that restores or modernizes an existing facility currently supporting active and ongoing programmatic or institutional requirements. This includes demolition and replacement with a new facility that has substantially comparable capability and size. This also includes projects that restore, modernize, or upgrade institutional infrastructure capabilities.

Revitalization - is substantial renewal and upgrade work on the physical plant to meet current and future needs, thereby extending its useful life. It is the renewal effort accomplished as a facility project that extends the useful service life beyond the original design life. Includes CoF Restoration and Modernization discrete projects (Repair and Rehabilitation/Modification greater than \$1.5M) and CoF Minor Program (Repair and Rehabilitation/Modification greater than \$500K but not exceeding \$1.5M)

Routine Facility Work - construction, repair, rehabilitation and modification, and environmental projects not to exceed

\$500,000.

Salvage - property which has some value in excess of its basic material content but which is in such a condition that it has no reasonable prospect of use for any purpose as a unit and its repair or rehabilitation for use as a unit is clearly impracticable.

Shall - Imposes obligation to act, secondary meaning, prediction of future action.

Should - Implies obligation or preference, but not absolute necessity.

Site Activation Need Date - the date equipment/Ground Support Equipment is required to support installation and validation. Uncrating, inspecting, and handling time must be allowed in establishing the site activation need date.

Spare - an item peculiar to a system or end item held in reserve or back-up.

Specifications- Kept- Intact - the NASA standard construction specification system.

Statutory Limitation - see [Limitation](#).

Minor Facility Projects Summary Brief Project Document, Form 800/01 - a document signed by the Headquarters Director, Facilities Engineering Division, used for execution of the Minor Program and Environmental Compliance and Restoration projects. It lists the Approved Facility Project Cost Estimate and approval date by project, provides stipulations for project implementation, and contains the Approved Program Plan that is the Resources Authority (NASA Form 506A) available to complete the projects listed under each category.

Supervision, Inspection, and Engineering Services (SIES) - funding allowance used to provide the necessary controls and management during construction, and such deliverables as as-built drawings and O&M manuals.

Supplemental Agreement - a bilateral modification to a contract that is commonly used to make negotiated equitable adjustments resulting from a change order; definitize letter contracts; and, reflect other agreements of the parties modifying the terms of the contracts.

Sustainability - An overarching concept incorporating appropriate sustainable design practices, maintainable design elements, building commissioning processes, and safety and security features into facility planning, design, construction, activation, operation and maintenance, and decommissioning to enhance and balance facility life-cycle cost, environmental impact, and occupant health, safety, security, and productivity. Done properly, sustainability will optimize the facility acquisition process to ensure the "best fit" of the built environment to the natural environment. It requires a practical and balanced approach to responsible stewardship of our natural, human and financial resources.

Validation - verification that the equipment/system meets the operational needs of the O&M user and is part of the turnover process from the design agency to the O&M agency.

Value Engineering - the systematic application of recognized techniques to determine the lowest practical overall cost of a facility consistent with the requirements of performance, reliability, and maintainability.

Will - Predicts future action.

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